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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,845	11/04/1999	FRANK G. BORDONARO	2705-87	4448

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EXAMINER	
JONES, PRENELL P	

ART UNIT	PAPER NUMBER
2667	01

DATE MAILED: 04/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/434,845	BORDONARO ET AL.	
	Examiner	Art Unit	
	Prenell P Jones	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) *21,30 and 37-44* is/are withdrawn from consideration.

5)☒ Claim(s) *4-20,22,23,31 and 32* is/are allowed.

6)☒ Claim(s) *1,2,24,29 and 33-36* is/are rejected.

7)☐ Claim(s) *3 and 25-29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments with respect to claims 1-44 have been considered but are moot in view of the new ground(s) of rejection.

Examiner withdraws previous final rejection. In addition, the previously indicated allowability of claims 1, 2 and 24-29 is withdrawn in light of new grounds of rejection. Examiner realized that claims 1 and 24 contain the same claimed limitations of previously rejected claim 37 that Applicant added in his response to office action dated 12/08/2003.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 24, 29, 33, 34, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gruber et al in view of Beigi et al.

Regarding claims 1, 2, 24, 29, 33, 34, 36, Gruber discloses (Abstract, col. 1, line 25) a method of measuring network performance comprising receiving at a given network address (net address of node B/respondent address) one or more performance probe data packet (Fig. 1 and 2), transmitted from a sender node address (net address of node A), each performance probe data packet having a defined receive time of day field therein (col. 8, lines 58-64) modifying the data packet to produce one or more modified performance data packets (col. 4, lines 65 thru col. 5, line 20). Gruber is silent on packet associated with sequence number. However, in analogous art, Beigi discloses monitoring of an IP network including performance measurement, (col. 3, lines 21-22) sending time of day indication (STOD), UDP packet with a local time stamp, (col. 2, line 20 thru col. 7, line 46) multiple probe packet, (col. 5, line 50 thru col. 6, line 3) monitor delays and loss characteristics between access points, (col. 7, lines 33-34) receive time of day at receiver (RTOD) for calculating transmission delay, echoing the probe packet to the sender (col. 7, lines 27-29, reflecting back to the source), comparing the sequence number to measure data packet loss (col. 3, lines 25-28), probe number along with first and second number shows sequence number, packets are accompanied

by sequence numbers during transmission, predefined protocol is UDP, and dedicated assurance software residing at the access nodes is the probe analyzing software (col. 4, lines 15-36 and col. 6, lines 14-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement in a delay monitoring/performance management of telecommunication networks associating sequence numbers with packet probes as taught by Beigi with the teachings of Gruber for the purpose of further monitor system performance and managing transmission times of cells/frames/packets associated with the network.

4. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gruber et al in view of Beigi et al as applied to claims 1, 2, 24, 29, 33, 34, 36 above, and further in view of Jain.

Regarding claim 35, as indicated above, Gruber discloses (Abstract, col. 1, line 25) a method of measuring network performance comprising receiving at a given network address (net address of node B/respondent address) one or more performance probe data packet (Fig. 1 and 2), transmitted from a sender node address (net address of node A), each performance probe data packet having a defined receive time of day field therein (col. 8, lines 58-64) modifying the data packet to produce one or more modified performance data packets (col. 4, lines 65 thru col. 5, line 20), and Beigi discloses monitoring of an IP network including performance measurement, (col. 3, lines 21-22) sending time of day indication (STOD), UDP packet with a local time stamp, (col. 2, line

20 thru col. 7, line 46) multiple probe packet (col. 7, lines 33-34) receive time of day at receiver (RTOD) for calculating transmission delay, echoing the probe packet to the sender (col. 7, lines 27-29, reflecting back to the source), comparing the sequence number to measure data packet loss (col. 3, lines 25-28), probe number along with first and second number shows sequence number, packets are accompanied by sequence numbers during transmission, predefined protocol is UDP, and dedicated assurance software residing at the access nodes is the probe analyzing software (col. 4, lines 15-36 and col. 6, lines 14-22). Both Gruber and Beigi are silent on calculating packet jitter performance. In analogous art, Jain discloses (Abstract, Figs. 10 & 11, col. 3, line 7 thru col. 5, line 61, col. 6, line 6 thru col. 9, line 38) monitoring/managing/improving performance associated with packet data transmission in a communication system whereby packet delay is used to monitor/manage communication in a system, sequence variable packet delay, packet sequence, difference between send timestamp and receive timestamp (timestamp difference/delay) used to calculate packet jitter values, multiple delays are estimated with respect to associated packets. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement using timestamp difference to measure packet jitter as taught by Jain with the combined teachings of Gruber and Beigi for the purpose of further monitoring/managing network performance as to minimize latency in the communication of data in a system.

Allowable Subject Matter

1. Claims 4-20, 22, 23, 31 and 32 are allowed over prior art.

2. Claims 3 and 25-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

3. The following is a statement of reasons for the indication of allowable subject matter:

Although the prior art, Beigi et al, Gruber et al, discloses a method of measuring network performance comprising receiving at a given network address one or more performance probe data packets transmitted from a sender node address, each performance probe data packet having a defined receive time of day field therein modifying the data packet to produce one or more modified performance data packets, RTOP, STOP for calculating transmission delay, echoing probe packet to sender, comparing sequence number to measure data packet loss, predefined UDP, dedicated assurance software residing at nodes for analyzing probe, but they fail to teach/suggest placing the receive-time sub field the RTOD at the responder network address, echoing the packet including the probe field at a respondent network, calculating packet jitter based on STOD and RTOD sub-fields for first/second packet, placing in a send sequence number sub-field/receive sequence number sub-field a relative send timing indicator/relative receive timing indicator respectively, instruction for generating one or more performance probe data packet wherein each performance probe data packet being dedicated to network performance measurement, analyzing a response from the software resident at the respondent address in accordance with a predefined protocol to

which software residing at the respondent address is programmed to respond in a predefined way, instructions executed at the receiver for writing into the timing probe data packet, modifying is performed by further placing in the defined delta time field data substantially representative of a amount of time elapsed while performing modifying and echoing of corresponding performance probe data packet, and last received probe data packet in sequence to produce the modified probe data packet, probe packet generated by sender contains sequence number for the present probe data representing the sequence in which plural ones of such probe packet are sent, sender compares send/receive sequence numbers to determine whether probe data packets were received by responder in sequence.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 703-305-0630. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

April 27, 2004

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 4/28/04